☐ 1: P47987 **PLASMOLIPIN** BLink, PubMed, Related Sequences, Taxonomy, OMIM, LinkOut

LOCUS PLLP_RAT 182 aa ROD 01-OCT-2000
DEFINITION PLASMOLIPIN.
ACCESSION P47987
PID g12230935
VERSION P47987 GI:12230935
DBSOURCE swissprot: locus PLLP_RAT, accession P47987;
class: standard.
created: Feb 1, 1996.
sequence updated: Oct 1, 2000.
annotation updated: Oct 1, 2000.
xrefs: gi: gi: 532799, gi: gi: 532800, gi: gi: 1143539, gi: gi: 1143540
KEYWORDS Transmembrane; Transport; Ionic channel; Ion transport.
SOURCE Norway rat.
ORGANISM Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
REFERENCE 1 (residues 1 to 182)
AUTHORS Fischer,I. and Sapirstein,V.S.
TITLE Molecular cloning of plasmolipin. Characterization of a novel proteolipid restricted to brain and kidney
JOURNAL J. Biol. Chem. 269 (40), 24912-24919 (1994)
MEDLINE 95014262
REMARK SEQUENCE FROM N.A., AND CHARACTERIZATION.
STRAIN=SPRAGUE-DAWLEY; TISSUE=Kidney
REFERENCE 2 (residues 1 to 182)
AUTHORS Gillen,C., Gleichmann,M., Greiner-Petter,R., Zoidl,G., Kupfer,S., Bosse,F., Auer,J. and Muller,H.W.
TITLE Full-lenth cloning, expression and cellular localization of rat plasmolipin mRNA, a proteolipid of PNS and CNS
JOURNAL Eur. J. Neurosci. 8 (2), 405-414 (1996)
MEDLINE 96325522
REMARK SEQUENCE FROM N.A., AND SUBCELLULAR LOCATION.
STRAIN=WISTAR; TISSUE=Sciatic nerve
COMMENT On Jan 15, 2001 this sequence version replaced gi:1346732.

[FUNCTION] APPEARS TO BE INVOLVED IN MYELINATION. COULD ALSO PARTICIPATE IN ION TRANSPORT EVENTS AS ADDITION OF PLASMOLIPIN TO LIPID BILAYERS INDUCES THE FORMATION OF ION CHANNELS, WHICH ARE VOLTAGE-DEPENDENT AND K(+)-SELECTIVE.
[SUBUNIT] HEXAMER ARRANGED AS A TRIMER OF TWO PLASMOLIPIN SUBUNITS.
[SUBCELLULAR LOCATION] INTEGRAL MEMBRANE PROTEIN.
[TISSUE SPECIFICITY] EXPRESSION RESTRICTED TO THE SCIATIC NERVE, BRAIN AND KIDNEY. IN THE SCIATIC NERVE, FOUND IN SCHWANN CELLS; IN

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            THE BRAIN, IN DEVELOPING OLIGODENDROCYTES, ESPECIALLY OF THE CORPUS
            CALLOSUM, OF CORTICAL WHITE MATTER, IN THE OPTIC NERVE AND IN THE
            STRATUM RADIATUM AND STRATUM ORIENS OF THE HIPPOCAMPUS. IN KIDNEY,
            SEGREGATED TO THE APICAL SURFACE OF RENAL TUBLAR EPITHELIA.
            [DEVELOPMENTAL STAGE] IN THE SCIATIC NERVE, FIRST DETECTED AT
            POSTNATAL DAY 4, INCREASES TO A MAXIMUM AT DAY P14 AND THEN
            DECLINES TO MODERATE LEVELS IN ADULTHOOD. IN THE BRAIN, ONSET OF
            EXPRESSION IS AT DAY P1, LEVELS INCREASE TO REACH A MAXIMUM AT P20
            AND DECLINE SLIGHTLY TO ADULTHOOD.
            [SIMILARITY] BELONGS TO THE MAL FAMILY.
FEATURES             Location/Qualifiers
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                     /note="CYTOPLASMIC (POTENTIAL)."
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                     /region_name="Transmembrane region"
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     Region          57..68
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                     /note="EXTRACELLULAR (POTENTIAL)."
     Region          69..89
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     Region          90..99
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                     /note="CYTOPLASMIC (POTENTIAL)."
     Region          100..120
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                     /note="POTENTIAL."
     Region          121..141
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                     /note="EXTRACELLULAR (POTENTIAL)."
     Region          142..162
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     Region          163..182
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ORIGIN
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      181 ys
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